

CLAIMS

What is claimed is:

- 1 1. A method of collecting statistics in a database management system, comprising:
2 receiving a workload comprising a plurality of database queries;
3 identifying query statistics for the database queries;
4 consolidating the query statistics for the database queries to provide consolidated
5 statistics; and
6 generating one or more statistics collection tasks based on the consolidated
7 statistics.
- 1 2. The method of claim 1 wherein the database management system comprises one
2 or more collection objects and the consolidated statistics are associated with at least a
3 subset of the collection objects, and said generating generates the one or more statistics
4 collection tasks for respective collection objects of the subset based on the consolidated
5 statistics.
- 1 3. The method of claim 2 wherein said generating generates one statistics collection
2 task for each collection object of the subset of the collection objects based on the
3 consolidated statistics.
- 1 4. The method of claim 2 wherein the collection objects are table spaces.
- 1 5. The method of claim 1 wherein the query statistics comprise table information for
2 a plurality of tables, the tables being associated with collection objects, wherein said
3 generating groups the statistics collection tasks for the tables by collection object.
- 1 6. The method of claim 5 wherein each table of the plurality of tables is associated
2 with a table score based on, at least in part, a number of references to the table by the
3 queries of the workload, further comprising:

4 determining a collection object score for each collection object based on, at least
5 in part, the table scores for the associated tables of the collection object to provide
6 collection object scores, wherein said generating generates the statistics collection tasks
7 for the collection objects in accordance with the collection object scores.

1 7. The method of claim 6 wherein the table score is also based on, at least in part, a
2 cost of the queries referencing the table.

1 8. The method of claim 1 wherein the query statistics comprise column information,
2 and when a column specified in the column information is part of an index, generating an
3 index portion of the statistics collection task to request database statistics for that column.

1 9. An article of manufacture comprising a computer usable medium embodying one
2 or more instructions executable by a computer for performing a method of collecting
3 statistics in a database management system, the method comprising:
4 receiving a workload comprising a plurality of database queries;
5 identifying query statistics for the database queries;
6 consolidating the query statistics for the database queries to provide consolidated
7 statistics; and
8 generating one or more statistics collection tasks based on the consolidated
9 statistics.

1 10. The article of manufacture of claim 9 wherein the database management system
2 comprises one or more collection objects and the consolidated statistics are associated
3 with at least a subset of the collection objects, and said generating generates the one or
4 more statistics collection tasks for respective collection objects of the subset based on the
5 consolidated statistics.

1 11. The article of manufacture of claim 10 wherein said generating generates one
2 statistics collection task for each collection object of the subset of the collection objects
3 based on the consolidated statistics.

1 12. The article of manufacture of claim 11 wherein the collection objects are table
2 spaces.

1 13. The article of manufacture of claim 9 wherein the query statistics comprise table
2 information for a plurality of tables, the tables being associated with collection objects,
3 wherein said generating groups the statistics collection tasks for the tables by collection
4 object.

1 14. The article of manufacture of claim 13 wherein each table of the plurality of
2 tables is associated with a table score based on, at least in part, a number of references to
3 that table by the queries of the workload, further comprising:
4 determining a collection object score for each collection object based on, at least
5 in part, the table scores for the associated tables of the collection object to provide
6 collection object scores, wherein said generating generates the statistics collection tasks
7 for the collection objects in accordance with the collection object scores..

1 15. The article of manufacture of claim 6 wherein the table score is also based on, at
2 least in part, a cost of the queries referencing the table.

1 16. The article of manufacture of claim 1 wherein the query statistics comprise
2 column information, and when a column specified in the column information is part of an
3 index, generating an index portion of the statistics collection task to request database
4 statistics for that column.

1 17. An apparatus for collecting statistics in a database management system,
2 comprising:
3 a processor; and
4 a memory storing one or more instructions that:
5 receive a workload comprising a plurality of database queries;
6 identify query statistics for the database queries;

7 consolidate the query statistics for the database queries to provide
8 consolidated statistics; and
9 generate one or more statistics collection tasks based on the consolidated
10 statistics.

1 18. The apparatus of claim 17 wherein the database management system comprises
2 one or more collection objects and the consolidated statistics are associated with at least a
3 subset of the collection objects, and said one or more instructions generate the one or
4 more statistics collection tasks for respective collection objects of the subset based on the
5 consolidated statistics.

1 19. The apparatus of claim 18 wherein said one or more instructions also generate one
2 statistics collection task for each collection object.

1 20. The apparatus of claim 18 wherein the collection objects are tablespaces.